

REMARKS

The Office Action dated July 13, 2004, has been reviewed carefully and the application has been amended in a sincere effort to place the claims in condition for allowance, in view of the newly cited reference.

Objections To The Specification

The Amendment filed on April 8, 2004 was objected to under 35 U.S.C. § 132 on the basis that it introduces new matter into the disclosure. Applicant hereby states that the added material "transmitting programmed response messages" does not have the definition indicated by the Examiner, in other words, the Examiner indicated that the phrase will be interpreted as "canned messages." However, this phrase was not intended to mean such "canned messages." Instead, the programmed response messages, in the illustrator embodiment, for example, are broadcast firmware start response messages 180 shown in Fig. 5. It is not a canned message but in fact it is part of the protocol of the present invention which effectuates the downloading of a new firmware image representing a new control program for a wireless communications network. In order to clarify this aspect, the words "programmed" and "message" have been removed from the claims to avoid any misunderstanding in this regard. And, the claim simply reads that the wireless subscriber terminal sends a response to the base station. Thus, the Examiner's objection in this regard has been addressed in the present amendment.

Claim Rejection 35 U.S.C. § 103

Claims 1, 3, 4, 6, 8 - 10, 12, 20, 22, 24-26, 28, 29, and 31 were rejected under 35 U.S.C. § 103a as being unpatentable over United States Patent No. 6,023,620 ("Hansson"), in view of United States Patent No. 6,044,265 ("Roach") and further in view of United States Patent No. 5,414,751 ("Yamada").

Briefly, Applicant's invention provides a system and method for downloading a new control program for a wireless communications network that does not require user intervention. A broadcast firmware transfer is performed in sequential stages beginning with initialization, in which the base station sends each wireless subscriber terminal a broadcast firmware start message and receives a response in return. One embodiment of the start message indicates the hardware model, the mask number, the version number of the software, and an ID number which uniquely identifies the transfer, a force-transfer and automatic transfer indication, a block size, and a number of blocks in the firmware image. A firmware block transfer is then performed in a series of broadcast firmware block messages over a broadcast control channel. Verification is performed to ascertain whether the wireless subscriber terminal received all of the firmware blocks, and if not, which blocks and what range of blocks are missing. A switchover to the new program is performed, if desired, which can optionally be done automatically upon completion of a successful firmware transfer.

The Hansson reference was discussed in general in the Amendment dated April 8, 2004, but the present rejections regarding Hansson will be addressed herein. The Examiner indicated that with regard to claim 1, 20 and 29, Hansson discloses certain aspects of

the present invention. However, it is respectfully submitted that Hansson does not disclose the matters claimed in claims 1, 20 and 29. More specifically, for example, Hansson does not disclose an automatic response which is transferred from each individual wireless subscriber terminal over a point-to-point channel (which can be either a control channel or a voice channel) to the base station indicating whether that terminal will be a recipient of the new control program. This is because Hansson requires user intervention such that "typically, the cellular telephone subscriber is instructed to depress a specific key or keys to initiate the downloading process." (Hansson, Column 2, lines 53-55).

Furthermore, the Examiner indicates that Hansson describes broadcasting the new control program in blocks of data from the base station to the recipient terminals. Applicant respectfully disagrees; the passage cited from Hansson does not state that the software is in fact sent in a series of blocks of data as required by Applicant's newly amended claims. Instead, Hansson simply indicates that the "new version of the software" is loaded into the inactive memory (Hanson, Column 3, lines 1-4). This suggests that the entire program is sent, at once, and not in separate blocks.

In addition, Hansson requires that the software is sent over the digital traffic channel. Applicant's invention, though it can send information over the traffic channels, is also fully capable of sending information over a control channel. Indeed, this can occur even while other operations are being performed because the blocks of data are interleaved with normal operating messages. For example, the Abstract of the Disclosure of Applicant states "each message in the series contains a segment of the control program,

and the series of messages is interleaved with other control data on the broadcast control channel in order to avoid interference with other call activities.”

Thus, the traffic channel does not have to be used. Secondly, the control program is broadcast in blocks of data and not in its entirety and furthermore, the recipient terminals are programmed to send a response which indicates the status of the blocks of data comprising the new control program, and can indicate whether some blocks were not received, and in fact can further indicate which blocks have not been received. Hansson is silent as to any of these matters and therefore cannot be said to have rendered Applicant's invention as claimed in claims 1, 20 and 29 obvious.

The Roach patent is providing solutions for searching for the best frequency band in which to operate a cellular set over a control channel. As part of these solutions, a method is provided for programming a cellular set which may be used to update a carrier list of system identification numbers (SIDs). The cellular set searches the list to determine which carriers are best in a particular situation. In order to update the list, the Roach system uses unassigned telephone numbers to send data updates to a specially programmed cellular set. Basically, the wireless system assigns a first telephone number for list management and a second telephone number as data frames to designate a valid or invalid SID. The data update in the record field following the non-assigned telephone number may be modified to include other programming instructions for implementation by the processor or data for storage within the cellular set. The record field can be used to carry any data update that will fit within the allotted space of the record field (Column 8, lines 7-15). Though Roach discloses this type of sending programming information to a

mobile telephone, it does not disclose broadcasting a series of blocks of data forming a firmware image representing a new control program. The system of Roach can only include that information which can be sent within the record field corresponding to a non-assigned telephone number. In other words, the base station places a call to this non-assigned telephone number which thereby sends the information. Applicant's invention does not require this but can send the blocks of data over the control channel which can be interleaved with normal messaging. In other words, unlike Roach, Applicant's programming can occur during normal operations. Therefore, Roach's discussion of sending data via a non-assigned telephone number alone does not render Applicant's invention obvious.

The Examiner turns to the Yamada reference to indicate that errors can be detected via a parity check. However, Yamada simply states that if any errors are detected, the data corresponding to the errors are re-transmitted. This does not disclose, teach or suggest that a new program is sent in a series of blocks, each block having been identified by an individual number which can then be identified by the wireless subscriber terminal such that only missing data blocks need to be retransmitted.

Furthermore, Yamada does not provide solutions in the area of a wireless network. Instead, Yamada is providing solutions to provide remote modification of a portable telephone apparatus which operates from a fixed telephone station. Thus, Yamada alone does not disclose, teach or suggest Applicant's invention and thereby does not render the Applicant's invention obvious.

The combination of Hansson, Yamada and Roach still does not arrive at Applicant's invention because Hansson requires downloading the entire program over a digital traffic channel. Roach requires a non-assigned telephone number to be used to send the associated data. Yamada may suggest performing a parity check and re-transmitting erroneously received data but without suggesting separate blocks of data is identified in the initial message, nor does it teach that only missing blocks need to be retransmitted. Even combining the use of the non-assigned telephone number in Roach with the Hansson concept of downloading software to a wireless telephone over a control channel along with Yamada's parity check, still does not give rise to the invention of claims 1, 20 and 29 which, as amended, indicate that the base station transmits information over a point-to-point channel about a new control program including information about the number of blocks and block-size of a firmware image representing the new control program (without user intervention). Furthermore, none of the references alone or in combination discloses, teaches or suggests broadcasting over a control channel a new control program as a series of identified blocks of data. None of the references discloses, teaches or suggests (alone or in combination) polling the recipient terminals over a point-to-point channel to determine whether all of the blocks have been received. None of the cited references alone or in combination disclose, teaches or describes transmitting a status message indicating the status or reception of the new control program including information about how many blocks were received and/or the range of blocks that are missing. Therefore, the cited references do not alone, or in combination render Applicant's invention obvious.

In order to enhance claims 1, 20 and 29 to better claim the invention and to clarify the distinctions which these claims have over the cited references, the independent claims have been amended herein. Accordingly, Applicant's respectfully submit that independent claims 1, 20, 24 and 29 are patentable over the cited references alone and in combination and further that the claims dependent from those claims are also similarly patentable over the cited references and are in condition for allowance.

Regarding claims 7, 27 and 33, these claims are dependent directly or indirectly on claims 1, 24, and 29 respectively and therefore are patentable in view of the amendments and arguments herein, even in view of the Halonen patent because Halonen's teaching of switching between an active memory and a second memory does not add anything to the combination that would render Applicant's invention obvious. It is also noted that independent claims 13 and 16 have been amended to better claim the invention.

With respect to claim 11 as well as claims 13, 14, and 16-18 which were rejected under 35 U.S.C. §103a as being unpatentable over Hansson, Roach, Yamada and United States Patent No. 5,794,141, and similarly, with respect to claim 15 as being unpatentable by Hansson, Roach, Yamada, Zicker and Lahdemaki and claim 19 as being unpatentable over a combination of such references the fact that that four or five references must be modified and pieced together with hindsight (in order to try to reconstruct Applicant's invention) suggests in and of itself that Applicant's invention is not obvious.

In view of the amendments to the independent claims herein, it is respectfully submitted that Claims 11, 13, 14, 15, 16-18 and 19 are now in condition for allowance.

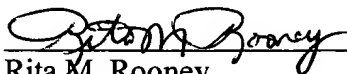
Summary

All of the claims have been amended either directly or through dependency and it is respectfully submitted that the application is now in condition for allowance.

Please do not hesitate to contact the undersigned in order to advance the prosecution of this application in any respect.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Rita M. Rooney", is written over a horizontal line.

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